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Are METHODS MEN SELLING THEMSELVES Short?

by R. L. Ornsby

WHEN METHODS men can establish a definition of their work, its scope, and the stature it should have in the business organization plan, they will have begun to achieve for themselves a standing on a level with such professions as accounting, engineering and the law. But that will be only the beginning of the effort.

I HAVE a great desire to see the full-time, staff methods man's job professionalized. I feel strongly on this point because I can see a great advantage to business management if this is done. I feel that it is the duty and obligation of methods men to become professionals if in so doing, their contribution to the efficiency of business management is increased.

Office methods and systems work, as a staff function, had its inception in the mid-1930's. It was ushered in by the new era of Government regulation introduced by the New Deal. Since then, the impact of new government controls, and the attendant requirements for record keeping and reporting, thrust upon business a heretofore undreamed of volume of paper work.

Today, the emphasis in business is on cost reduction. Economy is the byword. Faced with rising costs, managements are now looking to methods men for assistance in meeting the pressure of competition by reducing the costs of business procedures. Are methods men up to this job? Do they fully realize the opportunities and potential their work offers? Or are they selling themselves short? For the answers to these questions, let us look at the facts.

What have methods men done to establish a definite concept of their work and its place in the scheme of business organization and management? The facts indicate that eighteen years after the creation of the methods job as a staff function; methods men, management, and educators are still groping for a concept of the job. This is evident from the number of well-attended meetings, con-

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MR. ORNSBY is manager of the methods department of the Cleveland Electric Illuminating Co., Cleveland, Ohio. *This article was originally a talk given before the Cleveland Chapter of SPA earlier this year.*

ferences, and seminars which are held each year to explain what methods work is, how it can be accomplished, and the results that might be expected. It is also evident from the profusion of books, magazine articles, and other publications written on these subjects. And you find a considerable difference of opinion among the authors.

Dissension as to the place of the methods group in the organization and the scope of its activity points to still further confusion as to concept of the methods function. Disagreement among methods men themselves is additional proof of lack of concept. Some practitioners of the trade say methods work is simply the application of the principles of work simplification. Others say it's forms control. Still others hold that it's procedure writing. Then there are those who maintain it is clerical work measurement, or organization analysis, or policy manual preparation, or something else.

What Is the Job?

It is pretty clear that methods men have failed to establish a definition of their work, its scope, and the stature it should have in the business organization plan. This is not the case with other professions, such as accounting, law, and engineering. Can methods men expect to achieve professional status, or even do a real job until they and their managements know and agree as to what that job is?

Knowing what the job is is one thing; doing it is another. This leads to the question: What have methods men done to improve and advance the art? With the exception of a few pioneering, farsighted individuals, methods men as a group have done little to improve the lot of their profession. The same old techniques and tools are still being used: process and flow charts, task lists, work distribution charts, and check lists of various sorts. Pat answers and packaged plans are still being sought after for answers as to the approach to and solution of methods problems. In the matter of training methods personnel, the problem still exists, and a panacea is being sought.

The gathering of data, and its analysis and evaluation, are two primary functions performed by methods men. Upon the skill with which these functions are performed, depends the speed with which assignments are completed, the soundness of conclusions reached, and the acceptability of recommendations which are made. Because of the importance of technique, doesn't it behoove methods men to bend every effort toward the development of improved or new methods of performing their work?

If methods men have been selling themselves short because of lack of concept of their job and because of failure to advance the art of methods work, is it because they have set their sights too low? I am inclined to feel that this is the case. I think it is time for methods men to stop practicing a trade. The time has come to start building a profession.

How do we go about doing this? I offer a three-point program. First, we must adopt a high-level, executive management approach to methods work. Second, we must develop ourselves, our capacity to do the job. And third, we must convince management that our approach is sound, and necessary, if methods men are to make their fullest contribution to the efficiency of the enterprise.

Let us consider step one, adopting a high-level, executive management approach to methods work. In my opinion, our common fault as methods men is that we have permitted ourselves to become too much involved with details. In our analysis of procedures, we study the details of various clerical jobs in order to find the one best way of performing them. The same is true as far as our approach to forms control. Here we deal with individual pieces of paper. In the writing of procedures, again we are confronted with the job of preparing detailed descriptions and explanations.

I believe that because we have permitted ourselves to become so involved with details, we have narrowed and restricted our perspective as far as our jobs are concerned. I feel that if we really want to raise ourselves to professional status, and win for ourselves a place high in the business organization, we must adopt a new approach.

It is my belief that the real function of methods men is to serve executive management as fact-finding, problem-solving, internal business consultants. I think our job should be that of gathering, correlating, and interpreting data that will aid executives to do a more effective job of management. I believe that our time should be spent counselling management on how to improve procedures and reduce clerical and administrative costs. The responsibility for working out details should not be that of the methods man, but rather should be vested in line management.

Three functions

Under this concept, I visualize the methods activity as consisting of three main functions: (1) analysis and appraisal, (2) counselling, and (3) research. The analysis and appraisal function would involve the review and evaluation of major company-wide procedures in terms of objective and accomplishment. This would entail an analysis of policies, organizational relationships and responsibilities, and work flow within and between organization segments. It would involve the development of a planned, continuous program for auditing clerical and administrative functions of the business.

The methods man would regard the entire business as a production line with each of the major functions of the business as sub-assemblies. It would be his job to see that the basic business procedures, the major processes, were properly laid out, and that each of the sub-assemblies was properly geared to fit into the overall plan.

In other words the methods man would perform much the same job as the industrial engineer does in the plant. The difference would be that the methods man would be working with segments of organization rather than machines; paper work systems rather than conveyor belts; records and reports, rather than raw materials. He would be applying the principles of business organization and management, rather than engineering principles. In this capacity the methods man would serve top management as a staff consultant assisting in the solution of problems of business planning, coordination, and control.

The counselling function performed by the methods man would consist of advising management of the line on how to solve their own problems, instead of relying on methods personnel to do that for them. This would consist of such things as educating line management in the proper approach to the analysis of problems. Teaching them to search for causes, rather than to treat effects. It would involve training line management in the principles of work simplification so that individual supervisors could analyze the jobs for which they are responsible and work out the one best way of performing them.

It would involve indoctrinating line supervision in the principles of production planning, scheduling, and control so that supervisors could take the steps necessary to correct the faults in their operations by eliminating the causes of bottlenecks. It would require teaching management of the line, the principles of administrative control so that they could establish proper internal check points on operations for which they are responsible.

Education Neglected

Most members of line management have been trained primarily along the technical lines of getting out the work for which they are responsible. Their education in the area of business administration has been neglected. By counselling line management on the principles of good business administration and teaching them various techniques which they can use to improve their performance in this area, the methods man will be making a substantial contribution to increasing the efficiency of business. Furthermore, the more management people made aware of the need for, and results which can be accomplished through, the application of good administration principles, the greater will be the result as far as the reduction of the cost of administrative and clerical operations.

The third function of the methods activity under the executive management approach, would be a continuous program of research for new methods, equipment, management techniques, analysis techniques, and programs which would contribute to the advancement of scientific management. This research would take many forms. It would encompass reviewing case studies of the application of new methods techniques. It would involve the frequent exchange of ideas between methods men as to the approach to and solution of methods problems. It would require the methods man to do an extensive amount of reading in the broad field of business organization asd management. It would involve active participation in trade and professional associations for the purpose of discussing problems of business organization and management and possible solutions to those problems.

It would involve application of the doctrine of staff anticipation. This is described in the Organization Manual of the American Enka Corp. as follows: "The doctrine of staff anticipation is that the staff has the obligation of never permitting the chief to be caught unprepared or to be surprised. It is their obligation to anticipate possible future developments, and to initiate the necessary planning and studying, so that the chief has, well in advance, the considered expert opinion of the staff and their recommendations on the advantages of the possible alternative lines of action, together with their recommendations of what they consider to be the best alternative solution."

Ounce of Prevention

Adoption of the doctrine of staff anticipation will preclude having methods men spend all their time putting out fires in the organization instead of preventing them from starting. They will be on top of problems before they develop, and will have the opportunity to spend an adequate amount of time working out the proper solutions. This job will require well-trained, well-qualified, capable methods men. This leads to the second step in the program for professionalizing methods work which is that we must develop ourselves and our capacity to do the job.

Neuschel, in his book, *Streamlining Business Procedures*, makes the following statement: "Proficiency in the diagnosis and solution of procedural problems is the product of three factors commonly regarded as prerequisites to successful planning of any kind. They are (1) proper mental qualifications, (2) specialized knowledge, and (3) perfected techniques." To serve management as internal staff consultants, methods men must accept and apply these standards. Let's consider them individually. The first is proper mental qualifications. Normally, we think of these qualifications in terms of mental attributes, such as analytical ability, imagination, perseverance, and sound judgment.

I read a statement recently, which was made by the late Arthur D. Little, famous research chemist. I think it illustrates another facet of mental qualifications required by methods men. Little once said that there are four marks of a scientific mind:

1. The simplicity to wonder. The true scientist and research man wonders about things that many of us take for granted.

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How To Sell Accounting

by Bernard Whitney

IN ORDER to be able to sell Modern Accounting Methods, you must first realize what is wrong with accounting today, and what corrective measures should be taken. For much is radically wrong: the average manufacturer pays seventy-five percent too much for accounting which is *more than one hundred percent inaccurate*. For example, after much unnecessary copying and re-copying, the accountant arrives at a net profit figure of $100,000 for the current year. If you would make a thorough analysis of the steps taken to arrive at this profit, you could easily find that the true economic profit was actually a quarter of a million dollars instead of $100,000. Or even worse, that the firm lost $100,000 instead of earning this amount.

This suggests that there is a tremendous area for improvement in modern-day accounting. And there are few, very few, accountants who are doing anything about it! Here is a veritable gold mine for the systems man. He can do a job for which industry and eventually the accounting profession will be eternally grateful. A job which also will be very remunerative. He can effect substantial savings which will show up immediately in cold, hard cash. Therefore, the systems man can practically write his own ticket where compensation is concerned.

". . . This suggests that there is a tremendous area for improvement in modern-day accounting. And there are few, very few, accountants who are doing anything about it! Here is a veritable gold mine for the systems man. He can do a job for which industry and eventually the accounting profession will be eternally grateful."

There are two things basically wrong with accounting: First—*Faulty Principles* and insufficient data result in erroneous findings. Second—the *actual techniques* of bookkeeping are hopelessly outdated.

What is wrong with the principles?

I shall read from the May-June 1952 issue of *Harvard Business Review* where Professor Sumner R. Slichter is quoted: "There are two principal inaccuracies in reports on profits; one arises from the fact that most corporations still insist on counting a rise in the cost of replacing inventories as profits. The other is that most corporations count the rise in replacing plants and equipment as profit."

There are only two of the many errors on financial statements which have been pointed out by numerous economists ever since the early thirties. They have attacked again and again the basic principles of double entry bookkeeping. This principle dates back to the fourteenth cen-

Systems

tury, when the Italian traders noted that every debit has an equal credit. It has stood as a bulwark of strength ever since. But what was true for a tradesman in a static economy has been proven a lie for the manufacturer ever since the industrial revolution with its complex economic cycles.

Elementary economic logic tells us that two articles manufactured from the same raw materials, at the same time and place, with comparable machines and labor hours, must cost the same. But the accountant calculating costs by double entry bookkeeping methods may tell one entrepreneur that his cost is $300 per item, while he informs another that he will lose money if he sells below $400 per unit. If the true economic cost is $350, the firm who bids $300 will get the job and go broke; the other firm will not get the contract and have to close down. These differences between true costs and reported costs are due to the narrow concept of double entry bookkeeping. It states that for every item of cost or income recorded on the operating statement there must be an equal and offsetting entry on the balance sheet or vice versa.

You systems men must point out to management that the operating statement should show true costs and true profits or otherwise will be false and misleading. Taxes will be levied on false profits and bankrupt the organization. In a competitive society, the firm who understates its cost most will get the job and perish. False figures will be shown to stockholders and inefficient officers of corporations will be praised. Today, with high income taxes and added excess profit taxes, with a continuously increasing degree of industrialization and mechanization, with stronger competition and a strong inflationary trend, incorrect operating statements are catastrophic! Therefore costs must be today's costs, or replacement costs freed from historical data or arbitrary and capricious depreciation rates.

On the other hand, the balance sheet must reflect the intrinsic value of the manufacturing unit of today. Again historical data are irrelevant. The balance sheet must weigh the actual assets and liabilities, and carry the surplus as a balancing factor. The investor, the lender, the creditor and the manager all have a right to know what the actual net worth of the enterprise is. Any connection between the surplus on the balance sheet and the net profit on the operating statement is a mere figment of the accountant's imagination.

To be specific, if you want to assist management, ask the accountant or controller the following questions: (His figures are correct only if you get affirmative answers!)

1. Is the material cost the actual market price at the time of production, or does it include a profit or loss due to speculative buying?
2. Is interest on investments shown as part of the total cost regardless of whether the working capital arises from the proprietor's investments, from invested capital, from accumulated profits, from bonds or bank borrowings or from accounts receivable financing? And is the rate the current market rate?
3. Do depreciation and depletion charges accurately reflect the wear and tear on the machinery, equipment and real property, based on current replacement values, without taking into account whether the assets are new, used, or completely written off the books?
4. Are officers' salaries recorded at their true worth, disregarding whether the firm is a corporation, a sole proprietorship or a partnership, and independent from arbitrary amounts established for tax purposes or personal reasons?
5. Are extraneous expenses deleted, which includes expenses recorded solely for non-productive motives? For example: salaries to inactive partners, excessive travel expenses, or bonuses.
6. Have costs arising from unproductive capital or investments, or expensive financing or failure to take trade or cash discounts, been eliminated?
7. Do the assets on the balance sheet reflect today's market prices or the current values for a going concern of this type, including patents, good will and advantageous contracts?
8. Do the liabilities include deductions for purchase contracts above market prices; or sales commitments below today's costs plus current profit rates?

These are some of the basic questions which must be answered before the system set up by you will produce reports that will really enlighten management. And these questions will suggest others applicable to your particular type of operation.

This will be *your* job. Usually the accountant who is not familiar with the mathematical applications to economics will offer no help, only resistance, as he has done for the last twenty years. In a letter to me, Mr. E. S. McCollister of I.B.M. states that "Engineers can build almost any kind of machine." "Unfortunately," he continues,

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MR. WHITNEY is a member of SPA Los Angeles Chapter. He is a CPA and an attorney at law in the State of California.

Installing the

Punched Card Procedure

by Herbert A. Fraenkel

IN PLANNING the installation of a punched card system, management has several objectives in mind. A recent survey among one hundred users of both Remington Rand and International Business Machines punched card equipment indicated that speed in reporting (81.7%), more detailed reports (79.3%) and economy in clerical costs (73.2%) were among the major objectives which these companies hoped to realize. But regardless of what the objectives of management are, the current procedure must be surveyed, the best new system must be determined and the future installation must be planned so that the transition from the one to the other can be accomplished with a minimum of delay and confusion.

The need for such planning cannot be emphasized strongly enough, for in addition to the human tendency to resist changes, machine capacities must be evaluated and the optimism of management must be reckoned with. Management, once it is sold on tabulating equipment, expects miracles from the very first day of the installation, and even with perfect planning and scheduling and a smoothly operating conversion from the old system to the new tabulating procedure, results cannot be expected, and should not be expected, for at least six to nine months. This does not mean that the new procedure will not function for this period of time; it does mean, however, that it may not function smoothly, that rough spots may have to be ironed out and that savings should not be expected during this period.

The planning stage usually starts when management realizes that its present procedure, for some reason or other, is no longer satisfactory. This may be due to an inefficient system or ineffective supervision, Quite frequently growth of the company makes procedures once adequate for small or moderate volume operations highly inefficient and inadequate when the volume grows.

As the first step, management requests a survey and proposals for remedying and improving the situation. For example, by the middle of 1948, a manufacturer of cigarette lighters found that its present system of order and invoice writing, sales statistics and finished goods inventory operation was no longer satisfactory. The reason for this was that its present procedure, (Moon-Hopkins billing machines) involved so many steps that it was unable to meet peak loads or increased volume without running into overtime and back-logs. In addition to that, the finished goods inventory operation was generally behind the fact with its information, and there were strong indications that the figures were not accurate.

The survey, which indicated that 37 employees were directly engaged in these operations, aimed at the following objectives:

(1) Lower costs.
(2) Improved time cycle in all stages.
(3) More complete and more accurate statistical records.
(4) Greater flexibility to handle peak loads and increased volume.
(5) Greater flexibility to handle an expanded product line without sacrifice of efficiency or control.

Various proposed systems were studied and compared with each other and the present method. These were: com-

THE AUTHOR points to the necessity of detailed advance planning in the use of punched card equipment if anticipated benefits such as increased savings in clerical costs and speed in reporting are to be realized.

bination of present method with key-sort cards, combination of hectograph with keysort and pegboard, National Cash Register bookkeeping and statistical machines, and tabulating equipment.

The preliminary survey revealed that the tabulating equipment would

(1) Accomplish the objectives outlined.
(2) Reduce personnel from 37 to 17 employees.
(3) Result in monthly savings of $1,370 over and above the cost of the tabulating equipment but including the saving in personnel.

With such anticipated savings, management approved the installation of tabulating equipment. The equipment was installed during the month of April, 1950, and was in full operation by May 1, 1950. Seven months later, on January 18, 1951, a report was submitted to management which stated that the tabulating installation was already saving $741 per month over and above the cost of machines and cards, and that it was steadily increasing the savings as the installation progressed. At that same time a monthly saving in excess of $2,100 was foreseeable.

The planning did not stop when management agreed to the installation of tabulating equipment. Rather, one could say that was when actual planning for the conversion from the manual system to the punched card account method was started.

When management approves the installation of tabulating equipment, the problem of conversion from the manual to the machine system is usually turned over to a systems department which usually prepares the survey resulting in the recommendation of mechanization. The problem is to put into reality the plans that have been drawn.

Working back from the promised delivery date of the equipment, every phase of the installation must be scheduled over the twelve to eighteen months period which customarily lies between the order date and the delivery date. Such a schedule may be broken down into:

(1) Planning of the complete system including designing of cards and forms.
(2) Selection and training of personnel.
(3) Providing the necessary lay-out and auxiliary equipment.

The ease with which this conversion is accomplished depends to a large extent upon the planning and thoroughness with which all problems are analyzed and solved.

The initial step in the designing of a new system is to review the old one in order to streamline it and prepare it for conversion to the machine procedure. The problems confronting the analyst center around three factors: source documents, work simplification, and resultive records or reports.

In developing procedures for machine use typical errors result when one tries to follow the identical lines of the original procedure, thereby absorbing the disadvantages of the previous system with none of the advantages of the tabulating equipment. A better way is to study the entire activity, keeping in mind the capacities of the equipment and its inherent advantages which can be fitted into the new procedure.

After the system has been studied and revamped to fit the special machine needs, the source documents from which tabulating cards are punched are reviewed, and if necessary changed, so that all information needed is available in the simplest possible manner and in the order required. In addition, legibility of the source document must be assured—too often the procedure provides for an illegible copy to be furnished to the key-punch operator.

One of the most important phases in the installation of a tabulating procedure is designing the codes. These codes are divided into two distinct classes. The first is a purely mechanical code which is required to control and regulate machine functions or identify certain cards. The other code assists in classifying the data contained in the punched cards. Great care must be exercised in designing this code, and every possible and conceivable contingency should be considered and provided for because sooner or later, management will ask for certain data only to be told that the information cannot be obtained. It has become almost a truism to say that "if it is in the cards (tabulating cards), it can be presented in the report."

MR. FRAENKEL, a member of SPA in New York, is assistant to the Comptroller of Continental Grain Co.

At this point, the new procedure is engineered by preparing flow charts which show the development of the final data from the receipt of the source document, through key-punching and machine processing the cards and to the presentation of the result in a finished report.

As the actual machine procedure is developed, there are three tasks which require close attention: the designing of the tabulating card, the lay-out of the final report forms and the development of the machine use.

Tabulating Card Design

While all three steps are important, the one which is of particular importance and which more frequently is relegated to a secondary position, is the designing of the tabulating card. This card, punched from the source records submitted by the operating department, is the basis for all subsequent machine operations. These in turn give rise to the final product of the tabulating procedure—the printed report. The adequacy with which the card is designed or "laid out" benefits the tabulating installation in two ways. Firstly, it facilitates the physical process of punching by speeding the task through proper and sequential location of the card columns to be punched; and secondly, it eases processing of the card by the machines, reduces error and generally simplifies the operation.

The initial step in card design is to determine the data needed from the card in order to meet the requirements of the contemplated procedure. To accomplish this, it is necessary to consider the availability of data on the source document and the requirements of the finished reports so that all data needed for their preparation are included in the card and arranged to facilitate processing.

After the information to be included in the card has been gathered, groups of card columns, called card fields, are assigned to the information. It is necessary to follow these alignment principles at this time: a given item of information in a new card is placed in the same columns, or field, previously assigned to it in other cards: the fields of the card to be key punched are arranged so that the information can be read from left to right or from top to bottom on the original document. The task of the key punch operator is simplified if the information to be punched into the card is in the same order in which it appears on the source document.

Another item to consider is the manner in which the information is punched into the cards, whether by key punching, duplicating, summary punching, gang punching, or multiplying. All like punching operations should be grouped together to simplify wiring of control boards.

Next is the assigning of sufficient card columns to each card field. To do this, the largest number of digits required to designate each item is determined and the card field is laid out to accommodate them. Sometimes, however, there are not enough card fields to accommodate all the required digits. In such cases the decision is made whether to use two cards or to reduce the number of card columns to the number available on the IBM card.

Consideration is also given to the fields to be interpreted. Interpretation should be arranged according to the method of filing the cards, with the most important information in a prominent location for easy reference.

Report Form Design

The next step is designing the final report form. This requires reviewing the clerical needs for data in the primary, processing and final stages of the procedure, as well as all possible requirements for auditing. It is also necessary to design forms to record the various steps in the operation preparatory to the final report.

Actually, punched card reports may be run on blank tabulating paper. Often in the beginning of an installation this is recommended. It allows for greater flexibility, and especially if management is not familiar with the possibilities of punched card equipment, the blank forms, with the headings written in, are more advantageous.

Development of Machine Use

The contemplated use of the machines is developed. This involves determination of the volume of cards and forms, establishment of transcription methods and verification, charting of machine use and flow of work, preparation of detailed processing steps for individual machine use, preparation of machine load charts and time schedules, notation of exceptions to be handled from regular routine and arrangement of the type and manner of controls.

This last item requires further explanation for it has been said, flippantly, that preparation of data on punched card equipment is one of the most efficient ways of disseminating incorrect information. That is so because final reports which look perfectly normal after having been prepared on the tabulator may contain incorrect information unless proper checks and controls are introduced. Often, even with these controls, the results may be incorrect. Only the experience and efficiency of the operator may prevent the release of such an improper report. An alert machine operator is the best control medium.

Personnel Selection, Training

It has been estimated that the average tabulating installation using IBM equipment spends approximately 10% of its operating expenses on tabulating cards and 42% on rental cost of the equipment. The remaining 48% consists of the wages of the key punch and operating personnel.

It is obvious that salaries of the tabulating personnel

present a sizable portion of the total cost of the tabulating installation. Consequently, it is extremely important to select and train properly the personnel that is going to operate the installation. This training usually takes place before installation of the new system. It is conducted in technical schools conducted by IBM for personnel of IBM customers.

The training period required to make an inexperienced employee proficient in the operation of tabulating equipment depends upon the type of the machine he is to operate. It takes about two weeks to learn the operation of the key punch, but considerably more time is required to become proficient in its operation. To learn the operation of the tabulator, one requires at least six weeks of schooling. Even after that period the trainee has acquired only a knowledge of the simple mechanics of card handling and minor machine operations. Actual experience in handling an assignment is the best teacher.

Another personnel problem which deserves management attention is the supervision of the new tabulating installation. There are two schools of thought on this subject. One believes that it is better to have a highly skilled tabulating technician as the head of the department. Such a man is qualified to cope with all the technical problems that arise and is, in the true sense of the word, an engineer running a complicated and intricate machine.

The other school prefers a manager as the head of the department. This is based on the theory that in an installation which is rendering a service, the head man should have managerial ability, including the tact and patience to deal continually with his equals or superiors who may not understand the simplest fundamentals of punched card work. He must be able to talk two languages and be a true liaison between two different fields of work. He should be part salesman, part executive and part skeptic. He should never become lost in the maze of wiring diagrams which make the electrical equipment function. In fact, it is best if he does not know how to run a machine. The technical aspects of wiring control boards and setting up the intricate details of machine operations are better left to a skilled technician.

Best Qualified

During the installation period, the systems man assumes the role of leader; for having made the survey of the old routine and having designed the new system, he is best qualified to supervise the installation of the new procedure. His ideas acquired during the survey and his familiarity with the new method make him the obvious person to do the job.

The merits of any system are influenced materially by its installation and the length of time necessary to acquire a smooth-running operation. Therefore, the methods analyst should stay with the job until it reaches the point where it has been proven to management.

The installation period is one of the most critical times in the life of a system. The things which are done, or left undone, during this period, can easily make the difference between success and failure later on. Proper planning for a smooth conversion and an appreciation of the contingencies which might arise are of extreme importance. Very often, many steps can be taken long before the tabulating equipment arrives. In this manner, personnel long accustomed to old routines is converted gradually to the new ways, and the change-over is less abrupt with its disturbing and often demoralizing influence on the employees.

Reluctant to Change

Most people show a basic human tendency to resist the new, or a reluctance to depart from the old. This is especially noticeable in so drastic a change as is encountered in the conversion from a manual method to a punched card system. So far as possible the company and its supervisors must prepare their employees for the change in routine, process, assignment, location, etc. In other words an atmosphere of active participation to overcome resistance to the proposed changes must be instilled in the employees. For while the technical aspects of the system being installed are important, often the most trying installation problems revolve around people and personalities.

Before the punched card installation is established as an independent source of reports, a dress rehearsal may be made wherein the data is processed on punched cards for a certain period, while at the same time maintaining the original procedure. The result of the punched card operation is then verified carefully with that of the present system in order to reveal any discrepancies in the procedure or its controls. This parallel operation is continued until management is satisfied with the complete accuracy and adequacy of the punched card system. Some companies have been known to run parallel operations for six months before accepting the punched card system.

When a company considers converting to punched card equipment, it should visit several companies who already perform the contemplated job by tabulating. Much can be learned from such a visit, and many mistakes can be avoided by profiting from the experience of the other companies. If, in addition to visits to other plants, adequate preparations for the conversion are made, and a thorough training and indoctrination program has been followed, a temporary dual operation may be unnecessary.

There are three distinct stages in the development of a tabulating installation. These are the planning stage which has been discussed, the expansion period and the period when peak size of the installation has been reached. One

(Continued on Page 21)

Improvements in a Small

by E. B. Walsh

In which the author shows the steps to be followed in achieving control and efficiency with a limited staff.

LET US BREAK down our subject into its major classifications and attempt to define what we are talking about. Control, as used hereafter, covers the whole area of safeguards which assure interested parties in a business, stockholders, management, auditors, lenders of money, etc., that the operations of the business are being conducted for the best interest of all. Control is tied directly to systems and procedures, because it means the degree to which the general group of routines, procedures, and records within a company are designed to lend a high degree of credibility to the company's financial statements.

Control and efficiency within the office are closely allied to physical activities and circumstances of a business, and generalization is, therefore, difficult. However, there are a few basic principles of control which should be borne in mind in any office set-up.

The first is that control and efficiency begin with the proper distribution of duties among employees. Too often in a smaller office there is the tendency to allocate duties in accordance with an employee's capacity and without regard to definite lines of good audit control principles. A desk analysis should be maintained by the office manager or his assistant. This analysis should clearly set forth the duties of each individual and should form the structure around which good control is built.

The second basic principle is the maintenance, wherever possible, of a separation of the performance of an act from the authority for the performance of the action. Hence, we have the issuance of a purchase order by one department as the authority for the accounts payable department to disburse funds. The credit section should approve each new account added to accounts receivable ledgers. The accounting section should review each petty cash disbursement before the replenishment of the fund. The personnel section should issue authorization for the payroll department to add employees to payroll. An integral part of this aspect of control is the necessity of fixing responsibilities for certain functions with particular

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MR. WALSH, a member of the Los Angeles Chapter of SPA, is office manager of Ralphs Grocery Co.

Accounting Office

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individuals. This not only creates within the right type of employee a sense of trust, but also builds a good organization structure which will prove valuable for many things besides control alone.

The third principle is the need for a series of checks to see that the system is working. With two or more employees it is possible to exercise some segregation of duties and to provide for the checking of the work of one employee by the other. Checks may take the form of

1. Review and approval (initial, stamp, etc.)
2. Periodic summaries of transactions to give a better perspective than can be gained through inspecting individual items.
3. Complementary to reporting are the means afforded through the use of mechanical techniques and outside contacts. Posting machines with locked registers, the use of pre-numbered forms, the psychological and physical controls achieved through issuance of written receipts, visual recording, cash registers, etc., are all part of this principle.

The subject of control cannot be discussed without a reference to collusion, that is, the combining of two or more people to defeat the functioning of the control system. In any system this is a possibility, but it should never be our sole concern, because the greater dangers to controls are found where the system fails to function in practice due to negligence, failure of memory, changes not brought to light, etc.

Cost of Control Procedures

Throughout our entire effort to create more control and efficiency by 1) the proper distribution of duties, 2) the separation of authority from performance, and 3) the establishment of a series of checks and reports, we must beware of the application of control procedures, the cost of which exceeds the hazards that they guard against.

Office costs are already becoming a burden. I've heard of one company where the ratio of clerical workers to production workers has grown from one to twenty-five at the turn of the century, to one to nine just before the last war, to a ratio of one to four today. Almost every company today is making some sort of effort to improve operations, but with increased demands by management for more reports, increased government regulations, etc., we appear to be shooting at a moving target. It is true that some organizations are making strides in clerical work measurement techniques, and the office equipment manufacturers are helping us increase the mechanization of our offices through the development of larger capacity or more automatic equipment. Yet, it can be safely said that all of us recognize that although we may be winning some local skirmishes, we certainly are "losing the battle" of increasing clerical costs.

Several Avenues

In the smaller office there are several ways open to us for accomplishing our office tasks and still maintaining a limited staff. Five of these ways are:

1. The proper selection and surveillance of personnel.
2. The elimination of all unnecessary or unprofitable work, and work of a marginal nature.
3. The proper planning and designing of forms.
4. The breakdown of clerical tasks to their source and the utilization of the products of one operation to achieve another.
5. The use of mechanization where applicable.

The fewer the members of an office staff, the greater is the degree of control that can be maintained by personal observation and inspection of operations. The "boss" can get to really know each person, and thereby exercise a control, which is not possible in a larger office. The proper selection of office personnel will go a long way toward getting the utmost efficiency out of your system. With a limited staff, individuals should be more versatile and capable of fitting into all departments when the need arises.

Higher salaries for office staffs also tend toward a greater return per dollar expended. Capable, versatile office employees are well worth a little extra, and your investment will be repaid many times over in decreased turnover, lower training costs, and increased efficiency that the better caliber of help brings.

The second means of accomplishing an objective, that is, through the elimination of all unnecessary or unprofitable work, is a real, wide-open field of endeavor. One of

our biggest problems as office people is that we do not have to show a profit from our operations. This may, at first, appear to be an advantage, but it is really a stumbling block in the path of office procedural advancement. Too often we tend to defend our procedures and controls, rather than challenge their usefulness. Very few of our operations fail to meet the limited test of being useful. Just about everything we do serves some purpose or produces some value. However, how many of us look at our systems and procedures with the critical eye of whether or not the benefit produced is worth the cost of producing it?

Filing by Habit

As an illustration of this point, how many of you have looked at the cost of the retaining office records? To destroy them promptly would probably entail some element of risk, but I'm sure there are volumes of papers that are not worth the cost of retention, but are dutifully filed and transferred to old records storage each year.

Another illustration, how many of you would discontinue your check register? A company I know hasn't had one for several years. They use the second copy of the voucher check, filed numerically with an adding machine tape of discounts and net pay, and a control sheet posting of these two items to obtain monthly totals. This enables them to place their check writing on a typewriter and not on a bookkeeping machine, thus making it possible both to prepare the check more promptly and to avoid the necessity of a trained bookkeeping machine operator to write checks.

The calculation of the arithmetical accuracy of vendors' invoices is another hallowed field that bears investigation. I read recently of an organization that gave up making this check on all invoices of $50 or less when a study showed that it had been spending about $2,500 a year in clerical costs to catch errors which never cost the company more than $100 a year.

We have two expensive luxuries in our accounting make-up: speed and perfection. These are occupational hazards that all office supervisors must face. We often overstaff ourselves unnecessarily to meet a deadline that in reality could wait and more frequently we insist on exactness when rounded figures or informal estimates will do just as well. By being willing to challenge existing procedures and to take a calculated risk, we can very often achieve substantial savings by making small adjustments to our operating policies, accounting practices, completion deadlines, speed and accuracy requirements, etc.

The proper planning and designing of forms is another means of reducing costs and at the same time producing control and efficiency. Too often under the impetus of the many machine accounting salesmen at large today, we tend to adopt a "let the machine do it" attitude, when a mere redesign of your present method will suffice.

An illustration of what can be done through form redesign, and the use of an older, simpler method of summarizing and recording data is the cash recording procedure at Ralphs Grocery Co. The strip form technique has been carried out from the individual store cashier's report to the final cash receipt book in the office with no expensive investment in machinery.

Originally cashiers made their turn-ins on informal reports which were in turn transcribed to a store summary sheet by a head cashier. This store summary was posted in the office to a cash receipt book to obtain daily and monthly summary figures for the general ledger. By redesigning the individual cashier's turn-in, the store summary was made possible by spreading the cashier report on a spread bar and adding across to a store recap. The recaps were designed so that they could be in turn spread and summarized to a recapitulation sheet for the day. The 28 daily reports are summarized for a monthly total of all store transactions. This simple redesign saved considerable time in all 32 of our stores, as well as in our central office.

This point can also be illustrated in many billing operations where a redesign of an older form to meet new machine operating requirements will prove beneficial. A Portland, Oregon, firm reduced their billing force from three girls to two by redesigning their invoice form to have proper marginal alignments, reduced tabulations, and a preprinting of the most reoccurring items billed.

If we are to run our offices as economically as possible, we must utilize aid from two fields: one, the people who provide us with information, and two, the products of one operation, wherever possible, should assist is achieving another. Recently a local retail organization spent a considerable sum on new office equipment to aid in a relatively simple sales breakdown. It never occurred to them that the sorting of sales tickets at the point of sale by each salesman dropping tickets into a designated box, would have given them a quick method of obtaining sales by salesmen. Sales by products could have been achieved by dropping prefixed tags from each item sold into sales classification boxes, a total of tickets in each box would produce sales by classification. The same principle can be carried into other fields, such as, trucks and auto costs, etc.

Vendors Do the Work

A nation-wide organization has even adopted the policy of having their vendors submit weekly statements in a form that provides an analysis of purchases by products, thus placing their purchase analysis in the hands of their 50 or 60 suppliers, instead of bulking all the work in the one office.

An illustration of using the products of one operation to achieve others can be made by reference again to the cash reporting system of Ralphs Grocery Company. Individual ledger sheets were previously posted as a record of each

cashier's over or short. Under the new procedure, the individual cashier's reports are now filed in folders by cashiers and at the end of each period a comptometer operator runs a total of each folder and posts to a report.

In one firm, a tabulation section was considered a questionable installation, even though it was performing its primary task of inventory control, billing, and sales analysis very satisfactorily. The tabulating supervisor suggested using the billing summary cards to maintain accounts receivable on a tub file method using tab cards in lieu of invoices. This adaptation reduced the crew in accounts receivable from seven to three, and aided materially in helping the machines prove profitable. Later, a sales summary card replaced a hand-posted sales analysis record by customers and absorbed the work of two additional clerks.

The fifth avenue open to us for control with a reduced staff is through the use of mechanized equipment. We are making great strides in the use of machines in the office. I recently read that the field of electronics in office functions is today where television was ten years ago, and the next decade will see a tremendous readjustment in office procedure brought about through this field. However, in our search for better methods, we must in looking at the mechanized field keep a well-balanced perspective.

Mr. Richard F. Neuschel, assistant manager of McKinsey & Co. of New York, in a speech before the National Association of Cost Accountants set forth the following key points in regard to equipment selection:

1. Do not make the mistake of assuming that the improvement of office operations begins and ends with mechanization of the office.
2. Mechanical methods are not necessarily cheaper or faster than manual methods. Just because a given operation can be performed mechanically is not, by itself, a reason for doing it that way.
3. The choice of methods ought clearly to be based on what work needs to be done, not on what a given machine is capable of doing.
4. When making a study of a given clerical activity or procedure, do not limit yourself to a consideration of the present methods vs. a single alternative, which, more often than not, represents the proposal of an office equipment salesman.
5. Make an organized effort to find out what is new in the office machine field.

Job Doubly Difficult

The above five ideas are only a few of the avenues open to us in the road to greater control and efficiency with a limited staff. Systems and procedure men are primarily charged with the responsibility of awakening management to the many new and better ways of performing clerical tasks. The office procedure man has a doubly difficult job. Office procedures by their very nature require constant supervision and review to remain at the peak of efficiency. A warehouseman, when taught the easiest method by which a heavy box can be moved from one part of the plant to another, will make the procedure a habit. However, an accounts payable clerk having been taught a procedure for handling his clerical function will, unless constantly supervised, gradually modify his clerical task in many ways, particularly with extra analysis and special summaries, until the originally established procedure is distorted and changed beyond recognition.

Recognizing this fact, the system man's job takes on increased importance, not only to lay out and install systems that are efficient, but to set up procedures for keeping them that way.

Are Methods Men Selling Themselves Short?

(Continued from Page 5)

2. The ability to question. Few people know how to ask questions properly in order to get the right answer. Most of them soon stop asking questions to avoid embarrassment. Therefore, sometimes we get the answers, sometimes we do not.
3. The power to generalize. After wondering about something and asking "why," we often stop there. Instead, we should try to get an idea of some of the reasons or facts behind the obvious thing. We should see whether these same facts will apply if the situation is a little different. Is this thing we wondered about, a law or a fundamental principle? Will it apply in all cases?
4. The capacity to apply. It is not enough to wonder about something, to ask questions about, and to generalize—one must then apply the things learned.

The second prerequisite for a capable, well-qualified methods man is specialized knowledge. To do a job as an internal business consultant the methods man must be an expert in the field of business organization and control. He must be thoroughly indoctrinated in the principles of supervision. He must also, of course, have a practical working knowledge of the mechanics of clerical operations.

The third prerequisite for a successful methods man is that he use perfected techniques. A methods man must constantly develop his skill in the analysis of clerical routines. He must have a thorough knowledge of every trick in the trade that will help him in gathering, weighing, testing, analyzing, and evaluating business procedures. In addition, he must be thoroughly adept in the use of all the devices which can be used to present and sell his recom-

mendations. He should be skilled in the art of preparing written reports and proposals. He must be a top-notch conference leader; he must be a master at making oral presentations. He must be an expert in human relations—in getting things done through people.

The job of developing ourselves is a big one, but it's surprising how much can be accomplished in a short period of time if one only applies himself—and apply ourselves we must if we expect to attain professional status.

After we have accomplished the step of developing ourselves, the final step is to sell management on the high-level, executive management approach to methods work. We must convince management that this approach is sound, and necessary, if methods men are to make their fullest contribution to the efficiency of the enterprise. If we have thoroughly developed the concept of our job and have adequately prepared ourselves to perform it, this should not be too difficult.

And once we have sold top management on the high-level executive approach to methods work, we will *really* be in. We will have arrived as professionals.

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Top Management and Its Systems Needs

A report of a round table discussion at the Fifth Annual International Systems Meeting

DISCUSSION LEADER

John B. Joynt, ***Manager, Administrative Engineering Department, American Enka Corp.***

PANEL MEMBERS

Edward James Hanley, ***President, Allegheny Ludlum Steel Corp.***

Brooke E. Furr, ***Treasurer, McCormick & Co., Inc.***

Lorenzo Semple, ***Vice President and Treasurer, U. S. Pipe and Foundry Co.***

Everett J. Livesey, ***Comptroller, Dime Savings Bank of Brooklyn***

QUESTION: *How is the systems function organized in the companies represented here by the panel? Just how does the systems man function? How does he tie in to the key line and the key staff departments?*

Mr. Hanley: Our systems and procedures department is a central department which is operated under the direction of the Controller. This department has been organized for about four years and because of the remarkable job done by these boys in one of the plants where they were called upon to do some sweeping by a new plant manager, they have sold themselves to three of our four major plants. We now operate a separate systems and procedures department in each one of those three plants, with direct responsibility to the plant manager.

The systems responsibility is the responsibility of the line or the staff department head, in any one of our departments. The place of the methods or systems and procedure group is merely a service group, to help these fellows in discharging their responsibility. The function of their responsibility from the decentralized systems and procedures groups is back to the controller, but direct responsibility in each of these plants is to the plant manager. The fourth plant has not as yet bothered with a systems and procedures department. They have still got a selling job to do there.

Mr. Semple: In our company the methods and systems and procedures activity is a part of the financial department and reports to me, as well as does the chief accountant and the general auditor. The activity is far from being in a vacuum, being a department itself and is more an attitude we are trying to engender throughout the organization. In order to keep this alive and keep it functioning constantly, Mr. Fred Halstead, whom you all know, is the

active spark plug for this type of activity throughout our company. At the general office, he naturally participates in the formulation of methods, procedures and a great many of the policy decisions that are in the process of being developed.

At our operating plants, while we do not have a formal methods and systems department, that activity is continued by committees at the plants, which in turn are sparked by the general office methods and systems department.

Mr. Furr: We have one man who acts in the capacity of a systems and procedure department in our organization. He is primarily one to see that the operations between the various departments of the business, as far as new systems and procedures are concerned, are integrated properly and to work with the various department heads in trying to improve the various types of operations within the organization.

We have two means through which a lot of the detail work in connection with systems and procedures can be handled. One is through the regular organization, that you find in many companies. The other is through the subsidiary board system at McCormick & Company, where we have a Junior Board of Directors and a Factory Board of Directors at each of the plants at which we operate and Sales Boards at each of the sales divisions of our organization. Our systems man works with those boards, as well as the individual operating heads of the various departments, endeavoring to improve the systems and procedures of the company.

Mr. Livesey: We have the work simplification men in the key departments, coordinated from the top, with staff function under the controller and a work simplification coordinator, who works with these men and sees that the ball keeps rolling. If the ball isn't rolling, he talks to the department head about it and asks "What's the matter?" It's a little needling operation where the ball seems to be slowing down. Then we have many inter-departmental projects which require coordination from the top, and he handles these.

The controller keeps in touch with the president who is very interested in work simplification and says that work simplification is the best thing that ever happened in the Dime Bank. He says it often and loud enough so that it does a great deal of good and a great deal of help. Every once in awhile, the president will get all the work simplification men together for lunch, just to tell him what they are doing. When they smell one of those lunches coming up, it is amazing how things begins to hum.

QUESTION: *What are the functions and what are some of the typical projects that your systems people have gotten into. in the last few years?*

Mr. Hanley: One of the first jobs that was done, was the beginning of an overhaul of all of the paper work in one of our major manufacturing departments. This is a continuing project. I am sure it isn't finished yet, but there have been a thousand and one jobs similar to that, that have developed as an outgrowth of that successful operation. At the moment, our systems and procedures group is involved in a study of a central order entry and production scheduling job, which cuts across almost every phase of the business—sales, manufacturing, manufacturing planning, and scheduling that requires carefully developed tables of time required to process orders. Since the systems and procedures department is merely the spark plug in this picture, the industrial engineering department and the personnel planning department and the personnel department are working with them, together with everyone else in these various departments to whip this thing into shape.

Mr. Semple: We had a number of developments take place in our company, which I might touch on. For instance, last November we commenced operation of a centrifugal casting plant outside of San Francisco and this is the first time that a centrifugal pipe plant or cast iron pipe plant has been put up on the west coast. This plant was staffed, the key men were drawn from a couple of our other plants, but clerical help and working forces, of course, were all recruited locally in California. In addition to advising the operating department(from the point of view of personnel audits, that they had made their acquaintanceship with men in the plants due to the fact, that they spend quite a lot of their time traveling in the general auditing department) they were assigned the particular job of going to California prior to the commencement of operation of that plant and remaining over the initial starting up time to actually institute a procedure. They were to set up all of the methods and procedures, accounting and reporting systems there. This, of course, is a dream come true to a systems and methods man—to start fresh and just set up a whole new system. Naturally, we didn't entirely reproduce the same systems as in use in other plants, because we tried to cull out what we thought was obsolete, but which was not perhaps ready to be taken out of the other places, and to simplify it down to a relatively small operation.

That is the kind of activity for which we depend on our systems people. To be prepared to set up a system in a new plant, when we institute one or a new line of activity.

Mr. Furr: One thing that we have done successfully in our organization, is to make the various operating departments request the assistance of our systems man in trying to develop a better method of doing the job. In that way, we get honest cooperation rather than the resistance usually generated by the technique of the expert who would tell

some operating department that he knew a better way of doing the job.

So successful has been that operation over the last seven or eight years that we have completely overhauled our system of invoicing, reporting, accounting, purchase control and our inventory control and many other things in the business besides that.

I said in the beginning, that we had two plants, one in California and one in Baltimore. We acquired the California plant about five years ago and that organization was not as aggressive as our company in Baltimore. Where many of the procedures and systems used in their plant operation were excellent—particularly in the administrative end of the business—they were more or less hanging onto methods that had been used through the organization over a long period of time.

Our systems man has spent considerable time in California changing and adapting the procedures that we use in Baltimore, to their organization there. It's been worked out in such a manner, that he is requested by that organization there to come out and assist them to work out those problems. I want to stress strongly that, in my belief, someone in this type of work must be a good salesman—an exceptionally good salesman to be able to sell others the ideas that he has and to sell them, on the idea that it is good for the business and good for their department and will help their final operating results and give the results which they want under their own supervision.

Mr. Livesey: I also want to second very wholeheartedly the statement that was just made, that you have to sell and if you can't sell, you might just as well not know a thing about systems and procedures techniques. We didn't have the success that McCormick Company has had in selling a staff man coming in from the outside of the department to the department heads. No matter how subtly we tried to do it, how carefully we tried to do it and how winningly we tried to do it, we couldn't get across the idea, that here's a guy coming up from the outside, he is going to tell me how to run my shop. I have been running this department for twenty years; I know more about it than this character will ever know and who does he think he is, coming in here anyhow, and so on.

That's why we went, because we were not successful—to the other side and put in trained men within the departments. That has worked very well for us.

So far as the projects which have been undertaken and successfully carried through to a conclusion, they are the kind you would expect, in an installation of our kind. Our business is primarily a savings bank. Two things; one the accepting of deposits and handling of depositors' business in general, and the other is the record keeping and accounting having to do with loans and investments. We have finished several major projects in the latter field, where we had wonderful inter-departmental cooperation. In one very large one we had a very serious lag in our mortgage accounting. A lag sometimes went to eighteen days of calendar posting, that was just bollaxing the works up like nobody's business.

We sent this department a team of simplification men—a man each from the auditing department, the tabulating department, the accounting department, and the new mortgage business department. Working under our coordinator, we put them on the problem. They came up with the solution to the overall time lag and in doing so—which so often happens and is important—solved about six or eight related problems along the way. These things had been minor burrs in our flesh, but we hadn't ever studied them. When they opened up the sore, they treated the entire organism and cured it.

In no time at all, we reached a point where, on payments made today, the records are current at nine o'clock the next morning. This means that if we want to call up a delinquent borrower to warn him about his situation, we won't risk the embarrassment of being told that the payment has been made. You have got to be sure when you are talking to a fellow along those lines. Now we can be sure. Payments that have been made up to the close of business this afternoon, will be posted and recorded by nine o'clock tomorrow morning. With a very very small group of supplemental employees who come in and work a couple of hours each evening on our tabulating installation.

On the other side of our business, we are now just starting a very far reaching project. We have three hundred thousand savings accounts. We are going to put our record keeping, interest calculation, extension of interest, recording of interest to the Federal Government and all the aspects of that problem on punched cards. We have a punch card installation which has included mortgages, bonds, payroll, safety deposits, real estate. We are now going to put depositors' accounts on punched cards.

That had an unsuccessful start quite a few years ago, but because of the new equipment that punched card manufacturers have come out with, because of a little better ingenuity and imagination on the part of the people who are selling such installations to banking, we developed an installation on deposits. We were just about to put it in, when we bought the whole Home Owners Loan Corporation mortgage portfolio for the whole state of New York.

We decided that was going to give us enough indigestion for awhile, without worrying about deposits. In the meantime, our good friends at the Philadelphia Savings Fund Society have gone ahead with this thing and have done a marvelous job with it. They have a swell installation down there, and now that we have digested these mortgages, we are going ahead with this depositors' installation. The work simplification men will do that job.

We will have our branch representatives and our main

office banking representatives, our audit department representatives and our tabulating department representatives as the team which will work with the work simplification coordinator. We don't do a big change job on accounting, reporting or systems, or anything else, it is just automatic, the work simplification men do it. Nobody considers doing it any other way; they really have found their niche in our place.

We have these men in the departments who have been trained—on bank time of course and bank expense—in work simplification techniques, process charts, etc. Some of them give full time, some give part time, some give a few hours a week, depending on the size and nature of the department involved. I might say also, that they work on space problems, they work on organization charts, they work on forms design.

QUESTION: *What do you consider some of the most important jobs to give a systems man? I am not now thinking in terms of the projects, but what should we do more of? What should we avoid? How can we serve our management better? Can you give us some inside on that, from your point of view?*

Mr. Hanley: I think that the most important job of the systems man, is to always keep in mind that what he is doing, is performing a service for the various departments, I think that one way you can stop the usefulness of a systems department, but quick, is to give the systems man the responsibility of making some decision along these lines. The minute he starts to administer a job, he ceases to be a service man that was helping someone else do his job and at that moment, rivalry automatically starts up and resistance can't help but build up.

Mr. Furr said, that this problem of salesmanship is of utmost importance. It is, It's part of this job of being truly a service man, in straightening out jobs wherever he happens to be working. Seems to me, that that's a means to the end. Now the end may mean almost anything. I don't know why a systems and procedures man should avoid any job at all, unless it's patently beyond his scope, in which event, he ought to be smart enough to try and find help in the organization, or if he doesn't find help in the organization, to recommend that help be obtained from some outside consultant.

I can't think of any particular job that we ought to say the systems and procedures man should favor above any other. The important thing is to undertake every job as though it were important and really to do a job so well, that more keep coming behind the one that's finished.

Mr. Semple: It seems to me that the principal objective in this kind of work that we are all so interested in, is connected with size—the great curse of modern organization. We have it both in government and business, and size alone introduces this complexity. That all the efforts of methods, and systems and procedures are to find some simple way to deal with this complexity—some way, so that the information which is necessary can be developed at levels where it is necessary. It seems to me that it is most important that the type of procedure be geared to the people, to the organization themselves, to their temperaments, and to their responsibilities. Very frequently, I think you will find that organizations look like one thing on the organization chart, but somewhat different when you examine the actual structure. You find that due to the personalities of the people involved, or their historical background, and the different ages of the various divisions, such charts don't work out exactly the way they look.

It is very necessary that all methods be tailor-made to the organization. In other words, I don't think you will ever have much success, if you try to bend the organization into systems and methods. I think you will have more sucess, if you will look at the people and fix the responsibilities on people where they belong, at various levels and then give them these tools and techniques to work with.

It seems to me that one of the things that have to be avoided in this kind of work, is the overdevelopment of information. I think frequently you may find that you twist an old saying, "If a thing isn't worth doing at all, it isn't worth doing well." Frequently in an organization, particularly if we have an old organization, we find a lot of things being done very well, which might very well not be done at all.

Developing actual accounting reports which go into the financial records, as compared to informational procedures and informational records are always in danger of developing a type of highly specialized personnel in the company which are information digesters. That's all they do—digest information. And they will digest you out of business, if you have too many of them around. So that I think you always have to keep this objective in mind, to avoid doing things, that even though they are being done well should not be done or it isn't necessary to do them at all.

Mr. Furr: I feel this way also and I think that our company does. One of the most important things is that the reports or information that is distributed to operating people for their use should be given to them in the manner that they want it, so that they can make the best use of it. After all, most of the operational men, or executives in a business are pretty highly paid for being given the responsibility of getting a job done. We found if the information isn't given to them in a manner in which they can understand it easily, they won't make much use of it. It will go in a bottom drawer some place and they will use other means to operate their departments.

Mr. Livesey: Three thoughts have occurred to me as I was listening. I go along with everything that has been said. First, I feel very keenly that it is more important for a methods man to be a good student of human traits, than it is for him to know his techniques of methods work. I have seen so many men with good ideas who knew their stuff, who could really improve things, fail dismally because they hadn't taken the trouble to find out what is the right approach to the various people they deal with. The important thing is that the way you are going to sell it to Johnny and the way you sell it to Jim and the way you sell it to Dick, are going to be three different approaches, sometimes diametrically opposed. I think one of the most important things for work simplification men is to know the people in their organization. Know how you go about tackling each one of them and believe me it's going to be different each time.

I am now in the middle of a book that deals with the human elements in supervision. It declares that the best clerk doesn't make the best supervisor. How many times we have found that out. It is important to know what it is in people that makes them tick, what you have to watch out for, and the psychology of handling people. Get a good book or take a university course in psychology. To my mind, you will do yourself more good than by all the forms, charts and work distribution charts that you will ever draw in your whole life.

The second thing that I would like to say is that I am more and more a disciple of reporting by exception. We are more and more saying in our place, we want to know only things that go wrong. When things are going fine, we don't need a lot of reports. Another technique we have evolved, is the use of committees way down at a working level.

One of the things we have our work simplification men do, is to get together every once in awhile and at random take a bunch of forms out of the printing department and go to work on them and see what they can do to improve them. It keeps their hand in on forms design. By their mutual discussions they train each other, and they get a company-wide viewpoint, instead of a departmental viewpoint. It also keeps the men who are designing forms around the place on their toes, because they don't know when one of their forms is going to be examined. They don't want to be in a position of having a lot of holes found in their forms.

We also have as every other business has, a lot of statements that were needed once and because they were needed once, they have been produced ever since. We have a lot of other statements that because someone else needs them some fellow says, "Oh fine put in a copy for me as long as you are producing it" and by the time you get through, you have enough copies so that you are running them off on duplimats. Every once in awhile, we will go through all the statements in the place and emasculate them. Make everybody prove they have got to have that statement, what they want it for, why it has to be in that form, why it has to be in that content, why it has to be in that number of copies, why it has to be monthly instead of quarterly, or annually and we really put them through the wringer. Boy! the water we get out is just amazing!

Installing the Punched Card Procedure

(*Continued from Page 11*)

of the important stages of the development of a well-rounded tabulating installation is the expansion. Once tabulating equipment has been installed in any one of its applications, management soon makes innumerable suggestions to place one or more operations on the machines.

In most instances it is thought that tabulating equipment is a cure-all, and that it will work wonders in instances where inefficiency alone in the previous methods prevented them from working satisfactorily. The danger is that marginal machine work is accepted; that is, work which is not readily adaptable to tabulating equipment, and which is only put on the machines in order to utilize apparently idle time. Before accepting such work, comparative cost studies of the present and proposed methods should be made.

Need for Procedures

There are many advantages to be derived from the use of procedure manuals in tabulating installations. During the preparatory stages of an installation, overlapping functions, duplication of work, uncoordinated relationships between departments and inconsistencies in operations are recognized and eliminated as the procedures are developed. Later on, a basis is provided for refinement of the existing procedures and development of new ones.

Procedure manuals define responsibility and reduce errors by telling each individual to whom and for what he is responsible. They also tend to make results uniform and are excellent media for training new employees in their duties.

Written procedures serve a real function whenever:

1. The task to be performed is complex.
2. The job involves a number of people.
3. The employees covered by the procedure are prone to misinterpret verbal instructions.
4. A new procedure is being initiated, or an old one revised or deleted.

Inadequately planned, a tabulating installation rarely gets past its infancy stage, because management, disappointed with the lack of results and conscious of high costs, simply throws it out. Well planned, efficiently scheduled and backed by a properly understanding and

lenient attitude of management in its early stages, a tabulating installation may well integrate itself, show substantial savings in cost, considerable advantages through speedier information, more detailed data and more flexible performance.

Once established, a tabulating installation easily becomes the backbone of administrative procedures and remains the tool through which management controls all phases of the business enterprise. It must always be kept in mind that tabulating is not an end in itself, it is merely a tool, a service, a mechanized assistant to management.

Selling Accounting Systems

(Continued from Page 7)

"machines can only follow instructions and their use will depend upon the success of the economist in making theirs an exact science similar to engineering."

The average accountant, only recognized as a professional during the last fifty years, is loath to cooperate. He is afraid that his newly acquired status will be taken away from him. He clings to forms and principles which have lost their reason and meaning. So little does he want to change that "Installation of Accounting Systems" is not even a subject on the C.P.A. examination. The *Journal of Accountancy* in both their June and July 1952 issues had to inform the accountant (on pages 706 and 769 respectively) that "the first and foremost function of accounting records and procedures is to facilitate management," which accountants tend to overlook.

Further, I would like to quote from page 117 of the January 1952 issue of *Fortune*. "Perhaps the major block to fast development of business computers is the human, or more specifically the accountant, mind. . . . The accountant mind, clinging to excessive paper records, is a hindrance."

This leads us to the second error to be corrected: Excessive paper records, or in other words, wasteful accounting techniques. Our methods must be brought in agreement with modern technical concepts.

The fifteenth century *Computista* wrote all transactions in sequence in a day book, then classified them in a journal, finally compiled them in a ledger. To this day this method has remained unchanged, except that in order to adapt this system to modern requirements, many special journals and subsidiary ledgers have been added. Presently the same figures have to be copied not once or twice, but often ten times to obtain certain desired information.

Our modern accounting and tabulating equipment does not reduce or eliminate this needless copying. It does it faster and more efficiently, but performs the same useless operations. We have progressed from the wheelbarrow to the horse and buggy, and from there to the automobile, but we still use the same roads, are stopped by the same streams. The accountant must throw off his chains and start to fly. The information is what we want, not the journal and the ledger.

The accountant who still insists on the traditional records forgets three important factors. In the first place, the great quantity of business transactions and highly paid office personnel have made this procedure very expensive. Secondly, the pressed entrepreneur needs his information fast, he cannot wait until the slow accounting process has finally produced the required reports. Finally, and most important, bookkeeping has long ceasel to be the only office function. The same data is used by many departments. Billing, statistical, sales, costing, pricing, production control and purchasing sections also keep detailed records. Therefore the accounting function should become part of a general information gathering department, and ruthlessly taken from its elevated cubbyhole.

The accounting section should use the information in the form in which it finds it, without copying it in its fifteenth century records. Instead of an accounts receivable ledger, use a copy of the unpaid invoices filed alphabetically. The accounts payable ledger can be replaced by a file of incoming invoices or of checks held. Cancelled checks can become the disbursement journal; duplicate invoices the sales register, deposit slips the cash receipt book. Time tickets and material requisitions, assembled by production orders, will replace cost records. The general journal, general ledger, and monthly statements can be replaced by one oversized worksheet designed for an entire year's reporting.

Even where tabulating equipment is used we often find separate machines and separate cards for the accounting department. Or even worse, according to I.B.M., in several companies where punch cards gather all the accounting facts, completely posted ledgers are kept on the side.

You will have to overcome many arguments but *you must win*. Because much of your systems work in other fields will be undone by cumbersome accounting techniques. As *Fortune* says: "A much more thorough systems organization and elimination of excessive clerical steps are required to make full use of the rigorous logic of modern office machines." It is your task to prepare the path to what *Fortune* calls: "The Second Industrial Revolution." To throw off the shackles, to scrap misinformation, to guide today's manufacturer, is your responsibility!

NOTE: Some recent articles in the *Journal of Accountancy*, the official publication of the American Institute of Accountants, show that the accountant has become aware of the problems: 'Depreciation and Maintenance of Capital During Inflation', December 1952, and 'Accountant's Role in Building Work Simplification Programs', April 1953. Also Mr. Maurice E. Peloubet of A.I.A. discussed, 'Is the Accounting Profession Meeting Its Responsibility with Respect to the Effect of Changing Price Levels on Financial Statements?' during the August Graduate Study Conference held at Stanford University.

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SYSTEMS AND PROCEDURES ASSOCIATION OF AMERICA
P. O. Box 96, Madison Square Station, New York City, N. Y.